

# **Do Engineers Make Good Managers?**

**A Discussion**

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Looking back in world's history, some of the greatest business leaders were engineers. While today only 20 percent of Fortune 500 CEOs have a degree in engineering. Microsoft CEO, Satya Nadella, is an engineer. So is General Motors' Mary Barra and Amazon's Jeff Bezos. Looking at Indian corporate horizon, out of 33 CEOs of various type of organizations surveyed, only 39% found to have engineering degrees, while 45% are having degree in management. Out of 39% engineering degree holders, none completed MBA program. However majority of them are having masters degrees in engineering or science. All 39% CEO having engineering degrees are first generation leaders i.e. Ratan Tata, Mukesh Ambani, Narayan Murthy & Azim Premji & interestingly a very few of their children opted for engineering degrees but all opted for an Management UG / PG degree.

The trend indicates shift from industrial-focused careers to careers focused on business. Big businesses are running the economy and managing business has become more important. Through this transformation, engineers began to lose their positions as leaders of the great businesses they had helped to create, replaced by professional business managers. As a result, a leadership mentality was slowly stripped away from engineers and the engineering mentality started to play a lesser role in business decision making.

Engineers possess several qualities that define a good leader. They are detail-oriented and analytical. While they are meticulous, they still take risks, but calculated ones. They identify the root cause of a problem and provide an economical solution. They tend to have a very realistic outlook on situations and don't add the fluff. They keep it simple. They lead by example & are tech-savvy and understand how it all works. This provides them with a competitive advantage over other industry professionals.

There are several reasons why engineers tend not to actively pursue leadership roles or not preferred over the business degree holders. Few of those are identified as below:

### **1. Safe Start & Job Security:**

Engineers enjoy one of the lowest unemployment rates. Engineering has always been perceived as a safe start for anyone. It provide graduates with a set of skills that cannot be faked and which open doors for professional advancement.

This job security in engineering field, to avoid retrenchment, prompts engineers to focus more on engineering skills rather than managerial skills.

### **2. Image Problems:**

In spite of engineering's long and glorious history there seems to have been stereotyped image problems associated with the profession. Engineers are often identified as technical geeks, who excel at maths and physics & fail at host of socially-acceptable traits that eventually prevents them for managerial responsibilities.

Generally it is considered that engineers are good at attention to detail, problem-solving, numeracy, risk management and analysis but many may lack emotional intelligence and the necessary leadership, people management, and communication abilities.

### **3. Concentrate on Technical Aspects:**

One reason is that while working on assignments, engineers are often promoted on the basis of their engineering accomplishments and technical merits, rather than their management abilities.

The other reason is that they don't actively promote themselves. Engineers tend to place real value on data, technical grounds and accomplishments. Engineers tend to shy away from self-promotion because they are afraid of ornamentation and staying away from factual information.

### **4. Lack of Management Development Education in Engineering Syllabus:**

if leadership doesn't come naturally, it needs to be developed from an early age. When studying engineering, leadership education is simply overlooked. Pursuing an engineering degree is difficult task & essentially be engineering focused only. The curriculum is extremely vigorous and often doesn't include business courses that trigger a business mentality.

## 5. Change in Career Path:

Either love towards engineering field or fear of change in career path makes them to decide not to abandon engineering domain. Although many claim that they never had a genuine desire to be an engineer. It was the trend that high achieving students enroll in engineering studies than studying the humanities and social science disciplines, that made them decide in favor of engineering studies. But once in job changing career path shall spoil their years of hard work at engineering college and there after in industry.

## 6. "Their way" and the "wrong way":

Engineers are often found be leaders of start-up, small companies and technical departments. This gives them the tendency to think there is "their way" and "the other (wrong) way". In effect, this makes them to be ineffective delegators who adopt a micro-management style.

## Can Management Skill Development Program / MBA / PGDM Help?

So what makes a good leader? According to Stephen Covey in his book "Seven Habits of Highly Effective People", there are four imperatives for leaders: they must inspire trust, clarify purpose, align systems and unleash talent. Clarity of purpose and system alignment are driven into every engineer on day one of their training. Can the other two skills be taught? Certainly.

Professional education such as an MBA / PGDM helps build conceptual constructs which enable engineers to think through complex business situations. An MBA's understanding of various business functions hones ability to make balanced professional decisions. Besides this an MBA gives

exposure to other organizations domains i.e. finance, marketing etc along-with a focused approach towards human resource management, communication and inter personal skills.

## Engineering + MBA / PGDM Ticket to Success at India Inc:

An engineering degree and top up with an MBA / PGDM is believed to be the classic recipe for corporate success. Most professionals perceive that this path provides valuable skills for going up the corporate ladder along with helping sustain the competitive advantage. Today, organizations are increasingly adopting employee-friendly policies to enable them to do an MBA / PGDM through a sabbatical or corporate sponsorship aimed at equipping them with better skills. Few points in the support are as below:

- In today's corporate world, the role of an engineer is changing; an engineer is likely to be a manager who has to implement new practices and new technology for optimum use of resources and factors of production.
- Its like taking a step ahead in professional career.
- MBA / PGDM broadens an engineer's perspective significantly by introducing non-engineering concepts such as those in marketing, strategy, finance, operations, business ethics, entrepreneurship and many more.
- It is a myth that after joining management, engineer's technical skills are left behind. Management is very important part of professional life of engineer.
- A management degree gives multitasking ability to engineers. After completing a management degree, an engineer working in technical department of any company, can also handle management responsibility as well. In today's competitive market scenario companies require multitasking employees.
- An engineering degree will teach how to apply knowledge practically. While an

management degree will teach how to manage people with engineering degrees.

- With an MBA / PGDM, an engineer shall get extra attention and credibility in professional career - something that will offer him a greater opportunities to make an impact by taking on meaningful responsibilities.
- During MBA / PGDM degree, new links are developed with different people doing management degrees, which help throughout professional career of an engineer.
- To summarize an engineer with a MBA / PGDM shall have a solid tripod pedestal (business concepts, soft skills and solid network) that will assist him making a great career.

## Why Engineers should Opt for specialization in Operations Management?

Operations is the core of business in any organization. It represents a domain responsible for producing goods or services. Operation Management is management of system or processes that create goods and / or services. Managers are responsible for managing activities that are part of the production of goods and services. Some common jobs areas in organizations are Design, Projects, Production, Maintenance, Quality, Materials, Supply Chain, IT, Customer Service & Support etc. They are also expected to be interacting with those managers in other functional areas within the organization whose roles have an impact on operations.

MBA / PGDM has many specializations which are domain specific i.e. Finance Management, Marketing Management, Human Resource Management etc. These all force engineers to change their career path. The PGDM in Operations Management program is one step in the right direction, it provides engineers to hone managerial skills and remain in their domain area. Some of the reasons in support are:

- Engineers work at the core of any manufacturing or technical services setup.
- They lead a team of skilled manpower to ascertain the department / domain functioning.
- Operations Management specialization empowers each engineer with sharp engineering and scientific capabilities along with smart business management disciplines.
- Specialization in Operations Management gives engineers an edge over their peers in processes designing & optimization, quantitative techniques, data storage, processing & presentation, leadership and communication skills.
- Operations Management gives an exposure to other management domains as well i.e. finance, marketing etc. When working in core manufacturing domains engineers should have knowledge of other domains as well i.e. Marketing, Finance etc., since domains are interconnected e.g. a good manufacturing plan shall need a finance person node or production schedule should match marketing priorities as well.
- PGDM Operations Management has further specializations in Production Management, Quality Management, Materials, Supply Chain, Maintenance Management & Project & IT management, thus giving specialized management education in the field of experience of a working professional.
- It gives means and education necessary to start companies or manage family businesses in engineering field.
- As per a study, Operations Management is one of top 3 MBA specializations, opted mainly by engineers worldwide.

Hence specializations in Operations Management can not only make an engineer a good manager but can open new avenues in career path as well.